MEDICARE PAYMENT ADVISORY COMMISSION

PUBLIC MEETING

Ronald Reagan Building
International Trade Center
Horizon Ballroom
1300 13th Street, N.W.
Washington, D.C.

Thursday, March 18, 2004
10:06 a.m.

COMMISSIONERS PRESENT:

GLENN M. HACKBARTH, Chair
ROBERT D. REISCHAUER, Ph.D., Vice Chair
AUTRY O.V. "PETE" DeBUSK
NANCY-ANN DePARLE
DAVID F. DURENBERGER
ALLEN FEEZOR
RALPH W. MULLER
ALAN R. NELSON, M.D.
JOSEPH P. NEWHOUSE, Ph.D.
CAROL RAPHAEL
ALICE ROSENBLATT
JOHN W. ROWE, M.D.
DAVID A. SMITH
RAY A. STOWERS, D.O.
MARY K. WAKEFIELD, Ph.D.
NICHOLAS J. WOLTER, M.D.

AGENDA ITEM:
Differences in Medicare patient referrals to hospital-based versus freestanding skilled nursing facilities - Susanne Seagrave

MR. HACKBARTH: Last for today is skilled nursing facilities and differences in patients between hospital-based and freestanding.

DR. SEAGRAVE: Today I will present results from our ongoing analysis of the differences between hospital-based and freestanding SNFs. I will focus today's discussions on the factors affecting acute-care hospital decisions to refer patients to hospital-based SNFs. This research is being conducted by researchers at the University of North Carolina at Chapel Hill under contract with MedPAC.

The purpose of this research is to examine the systematic clinical differences in the types of patients going to hospital-based versus freestanding SNFs in order to better control for these differences when we look at the differences in resource use and outcomes between the two settings, which we plan to do in future work. For example, we have previously discussed the fact that the average length of stay in hospital-based SNFs is about half the average length of stay in freestanding SNFs, but until now we've not been able to sufficiently control for the patient populations when we look at the statistic, and it's important to control for these populations.

This is the research question that we're exploring, and the selection factors that we're considering in this analysis are patient characteristics, characteristics of the referring hospitals, and local market area characteristics.

Hospital-based SNF referral patterns differ substantially depending upon whether the acute care hospital the patient is treated in has SNF beds or not. Hospitals with SNF beds refer about 51 percent of their SNF discharges to hospital-based settings. Hospitals without SNFs, however, refer only about 13 percent of their SNF discharges to hospital-based SNF settings. So therefore, having a SNF unit is a strong predictor of hospital-based recall.

This also means that patients fitting the profile of a typical hospital-based SNF patient can be found in both hospitals with SNF beds and hospitals without SNF beds. They could also be found in both types of SNF settings.

The data we use for this analysis come primarily from CMS and they involve merged claims data from the acute-care hospitalization preceding the SNF stay, claims from the SNF stay, and claims from any rehospitalization occurring

within 30 days after the SNF stay. Also this information is merged with patient's MDS information and with the facility characteristics.

We also combined this data with data about the referring hospitals and market level characteristics. We used data from July 2000 to July 2001, and we exclude observations that are less relevant to the question at hand, including swing bed stays, discharges from non-PPS hospitals such as long-term care hospitals, and inpatient rehabilitation facilities, cases with a gap of more than a week between the hospital discharge and the SNF admission, cases referred 100 miles or more from the discharging hospital, and patients admitted to the hospital from a SNF that then go back to the SNF.

The prediction model used in this analysis uses observations for patients discharged from a hospital to a SNF. So we're not looking at other types of patients who might have gone from the hospital to home health or to another setting. We're looking specifically at patients that went from the hospital to a SNF. The dependent variable is, one if they went to a hospital-based SNF and zero if they went to a freestanding SNF. So in other words, all of the patients in our sample went to either one type of SNF or the other.

The independent variables that we're using in this analysis, or you might call them the explanatory variables are, as I said, patient, hospital, and local market area characteristics. This table gives you an idea of the types of variables that we looked at in our analysis to help explain whether patients were referred to a hospital-based SNF.

The model ended up predicting very well the probability of hospital-based SNF referral for patients coming from hospitals with SNF beds. We found that different criteria appear to affect referral decisions in hospitals without hospital-based SNFs. So for this reason we focused our analysis on just the population of people coming from hospitals that had hospital-based SNFs because this seemed like the clearest decision-making group, where the hospital was making a very clear decision on where to send the person.

This chart gives you the data breakdown of the number of observations in each group. Let me first explain the left-hand column. We sorted patients in the sample according to their predicted probability based on all the independent variables that you saw in the previous chart, their predicted probability of being referred to a hospital-based SNF.

So in other words, the less than 20 percent probability group, those are patients that looked most like

patients who end up going to freestanding SNFs. So those are patients that have a low probability of being referred to a hospital-based SNF. Although I want to point out that in all of these categories there are some patients who did go to hospital-based SNFs and some patients who did go to freestanding. So these are the characteristics of the patients themselves and how those predict the probability that they will be refer to a hospital-based SNF rather than a look at where they actually went.

Then when you get up to the 80 percent or greater row there you see that those are patients who look most like patients who are typically referred to hospital-based SNFs. You can see that the observations ended up clustering themselves at both ends, where patients were either very likely to look like patients who go more often to freestanding SNFs or they were very likely to look like patients who more often go to hospital-based SNFs, and there were fewer patients in the middle who could have gone either way.

This chart gives you the results of our analysis. As you can see, the patients in the 80 percent or greater probability of hospital-based SNF referral in the next-to-last row, these are patients who look a lot like patients who go to hospital-based SNFs. As you can see, they're more likely than patients who go to the freestanding SNFs, the top row of numbers. They're more likely to have no cognitive impairment; 63 percent versus 19 percent for freestanding SNF patients. They're very likely to be identified as people who are likely going to be discharged from the SNF within 30 days. This variable is assessed by the SNF staff on the patient's first MDS assessment, the five-day assessment.

So in other words, these are patients who are just identified by the SNF staff right off as being short-stay patients, and they're very likely to go to hospital-based SNFs.

They're also much more likely, if they go to hospital-based SNFs, to have support available at home, probably to take care of them when they're discharged from these short stays, and patients expressed a desire to return home. So all of these factors are found more often among the patients who are more likely to go to hospital-based SNFs.

On the other hand, they are less likely to have do not necessitate orders on their charts.

Patients who are more likely to be referred to hospital-based SNFs also tend to be younger. As you can see by comparing the pink column with the light purple column, people age 65 to 74 fall more commonly in the 80 percent or greater row that represents patients more likely to go to

hospital-based SNFs than those more likely to go to freestanding SNFs. And the reverse is true for patients in the category age 85 to 94 who are less likely to look like patients referred to hospital-based SNFs.

Finally, we looked at the most common reason for the patient's acute-care hospitalization. As you can see, patients hospitalized for joint replacement appear to be more likely to go to hospital-based SNFs, or to be referred to hospital-based SNFs than patients with other diagnoses. But we did not see that same trend with any of the other diagnoses that we looked at.

So in a sense our conclusion from this is that patient prognosis; i.e., what the SNF and the hospital predict is going to be the outcome for the patient has a greater effect on hospital-based referral than the actual diagnosis of the patient. We found that hospital-based patients tend to be identified by the SNF staff as likely short-stay patients, they tend to have a support at home, have a desire to return home, and be younger.

However, this does not necessarily mean that they are less clinically complex. If you consider a younger patient who may have joint replacement and might be in the early stages of their recovery and they go to a hospital-based SNF, they might still be more clinically complex at that stage in that they require more IV medications, more RN nursing time, and maybe substantially more rehabilitation therapies than you might think of an older beneficiary who perhaps doesn't have support at home who might end up in the long run going to long-term care in a nursing home. This patient might have lower needs for some of the RN services and the rehabilitation services, although still they need skilled care so they would still qualify for a SNF stay.

Finally, we found that joint replacement patients do have a higher likelihood of referral to hospital-based SNF, but we didn't find this pattern with any other diagnosis.

We conclude from this that the presence of a SNF unit in a hospital is a strong predictor of referral to a hospital-based versus a freestanding SNF, and that patient selection appears to play an important role in whether SNF patients are discharged from the hospital to a hospital-based or a freestanding SNF.

Lastly, we conclude that controlling for patient selection is very important when we're going to try to assess the differences between the two settings in outcomes and resource use.

The next steps for this project are just that, we plan to try to use some of this information that I just presented to you to control for patient selection when we look at outcomes and resource use between the two settings.

Then we also plan to look at the difference in costs using cost report information between the two types of settings.

So I welcome any questions or comments you have.

DR. NEWHOUSE: I thought technically this analysis was well done but I have been puzzling about the difference in the margins and what light this all sheds on that. Since at first blush the things you showed us wouldn't seem to explain that, which could lead back to an accounting kind of explanation again. But what I was wondering was, if I have a hospital-based SNF on another floor of my hospital versus I don't so I have to send them over to a freestanding SNF, will I, conditional on diagnosis, age, et cetera and so forth, discharge earlier in the stay? In other words, is what we are seeing in the hospital-based SNFs a form of unbundling that goes on differentially in hospitals with hospital-based SNFs?

So I would be interested in not the simple, just the propensities as you showed them on the other ones, but if you control for the key things what happens to hospital length of stay in the low and high probability groups, as shedding light on whether there is differential unbundling or not.

MR. HACKBARTH: Any others?

So potentially if we took that joint replacement patient, same age, everything, and matched them up, one in a hospital without a hospital-based SNF and they're being transferred to a freestanding, another identical patient in a hospital that does have a hospital-based SNF, what you're saying is those exact patients may cost different amounts in the skilled nursing care because in the one instance they're actually an early hospital discharge?

DR. NEWHOUSE: Earlier; exactly.

MR. MULLER: Aren't they one of the transfer DRGs?

DR. NEWHOUSE: Some of them are is the answer. They have to be less than the geometric length of stay in the DRG and a minority of them are, as I recall.

DR. WOLTER: Joe, I don't know the answer to your question. In our place we do have a SNF. It is actually staffed by an internist. A lot of the decisionmaking, I believe, by our physicians is clinical. Hospitals, by the way, don't make the decisions about these transfers, although I know there's a complex interaction between hospitals and what they make available and what physicians end up doing. But I think often times the decision is clinical. I think these are patients who are seen as patients who can go home, in the case of joint replacement in particular, but they're seen as more fragile and needed a little more rehab.

To your question, I don't know what the length of stay differences might be but it would be worth looking at.

Maybe they're a group of patients who reach the mean length of stay and then are sent to the SNF so they wouldn't necessarily fall out into the transfer policy. I've also done a little work since the January meeting at least looking at our own margins and accounting practices which I would be happy to visit with you about later, but I think that there's a loss in the SNF on many of these patients in Medicare, but perhaps the total of the payment you do get in the SNF plus whatever you get out of the DRG is a little better than what you'd otherwise have. I think that's why many hospitals have stuck with SNFs, although as we all know there's been a huge exit in the last three or four years.

DR. SEAGRAVE: Just to follow up on Joe's point, we are looking intensively at the hospital length of stay in many ways, in this study and in the other study that we're doing.

MS. DePARLE: I was just curious, in looking at your independent variables I didn't see anything about the socioeconomic status of the patient. Some of these aspects made me wonder whether some of that was going on. That you happened to maybe, in the case of the patients who were referred to a hospital-based SNF, have patients who happen to have a higher socioeconomic status, therefore -- I mean, some of the other factors that we do have data on I think tend to go along with that -- have more support at home, the desire to go home, et cetera. I wondered if that accounts for any of this.

DR. SEAGRAVE: You hit the nail on the head in terms of, we had a long discussion about is there any piece of the puzzle that we're missing in this analysis? Is there any data that if we had it we would really want to include? That was not only the number one but just about the only thing was we said socioeconomic status is exactly -- and we just don't have the data on those people. We're trying to figure out some creative ways of figuring that out.

DR. MILLER: Susanne, you do enter into the model the Medicaid buy-in, right? Isn't that the best proxy that we have?

DR. SEAGRAVE: That's the proxy that we have. As you know, the limitation of that is that it does not include the medically needy. That is just the state buy-in.

MR. HACKBARTH: Any others?

MR. SMITH: Susanne, I also had a question about the variables. There was no density measure of availability of freestanding SNF beds when you looked at the market variable. I would assume that there's variation and that it would matter.

DR. SEAGRAVE: The analysis does include that. I think the reason that it wasn't -- it was actually left off of the chart in part because we're trying to construct an

instrumental variable approach to look at outcomes and resource use, and it was inadvertently left off the chart. Actually I should have put it on there, because we were thinking about using that, and we're still thinking about using that as an instrumental variable, so it can't be in the first part of the model.

MR. HACKBARTH: Okay. Thank you.